



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/584,330	05/30/2000	Brain Unitt	476-1921	1746

7590 05/09/2003
William M Lee Jr
Lee Mann Smith McWilliams Sweeney & Ohlson
P O Box 2786
Chicago, IL 60690-2786

EXAMINER

LI, SHI K

ART UNIT	PAPER NUMBER
----------	--------------

2633

DATE MAILED: 05/09/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/584,330

Applicant(s)

UNITT ET AL.

Examiner

Shi K. Li

Art Unit

2633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☒ Claim(s) 19 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 May 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 13 recites the limitation "said indication" in line 2 of the claim. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 10-14, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Papadimitriou et al. (G. Papadimitriou et al., "Self-Adaptive Random-Access Protocols for WDM Passive Star Networks", IEE Proc.-Compu. Digit. Tech., Vol. 142, No. 4, July 1995).

Regarding claims 10 and 18, Papadimitriou et al. discloses in FIG. 3 an optical transceiver comprising a transmitter and a collision detector.

Regarding claim 11, Papadimitriou et al. includes in FIG. 3 photodetector and receiving buffer.

Art Unit: 2633

Regarding claim 12, Papadimitriou et al. includes in FIG. 3 WDM demultiplexer with a common port for signals of all wavelengths.

Regarding claims 13-14, Papadimitriou et al. teaches in page 307 right col., last paragraph that collision can be detected by measuring the optical power of the signal by means of a photofet.

Regarding claim 16, Papadimitriou et al. shows in FIG. 2 a communications network comprising the transceiver of FIG. 3.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-7 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papadimitriou et al. (G. Papadimitriou et al., "Self-Adaptive Random-Access Protocols for WDM Passive Star Networks", IEE Proc.-Compu. Digit. Tech., Vol. 142, No. 4, July 1995) in view of Wright et al. (U.S. Patent 6,411,410 B1).

Papadimitriou et al. discloses in FIG. 2 a passive optical network with a plurality of stations and each of said stations is optically connected to each other station. Regarding claims 1 and 17, the difference between Papadimitriou et al. and the claimed invention is that Papadimitriou et al. does not include a head-end station. Wright et al. teaches in FIG. 2 a passive optical network with a head-end station (OLT). One of ordinary skill in the art would have been motivated to combine the teaching of Wright et al. in the passive optical network of

Art Unit: 2633

Papadimitriou et al. because a head-end station can be used to provide connectivity to the core network or backbone network and greatly increases the services available to each station. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to add a head-end station to the passive optical network of Papadimitriou et al., as taught by Wright et al., because a head-end station can be used to provide connectivity to the core network or backbone network and greatly increases the services available to each station.

Regarding claim 2, the stations of Papadimitriou et al. use carrier sense/collision detection protocol.

Regarding claims 3 and 4, Papadimitriou et al. suggests gigabit LAN in page 307, left col., 6th paragraph.

Regarding claim 5, the passive optical network of Papadimitriou et al. provides optical connectivity from each of said station back to itself.

Regarding claim 6, Papadimitriou et al. shows point-to-point optical links from the star coupler to each station.

Regarding claim 7, Wright et al. suggests no optical connectivity from each station back to itself.

8. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Papadimitriou et al. and Wright et al. as applied to claims 1-7 and 17 above, and further in view of Profumo et al. (U.S. Patent 6,347,096 B1).

Papadimitriou et al. and Wright et al. have been discussed above in regard to claims 1-7 and 17. The difference between the modified passive optical network of Papadimitriou et al. and Wright et al. and the claimed invention is that Papadimitriou et al. and Wright et al. do not show

Art Unit: 2633

the telecommunication network. Profumo et al. teaches in FIG. 2 that the OLT and PON can be incorporated into a telecommunication network. One of ordinary skill in the art would have been motivated to combine the teaching of Profumo et al. to incorporate the modified pass optical network of Papadimitriou et al. and Wright et al. to a telecommunication network because service providers have already invested large capital in the telecommunication network and it is time and cost effective to upgrade and reuse the existing network instead of building a separate network. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the modified passive optical network of Papadimitriou et al. and Wright et al. in a telecommunication network, as taught by Profumo et al., because it is time and cost effective to do so instead of building a separate network.

9. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Papadimitriou et al. (G. Papadimitriou et al., "Self-Adaptive Random-Access Protocols for WDM Passive Star Networks", IEE Proc.-Comput. Digit. Tech., Vol. 142, No. 4, July 1995) in view of Di Martini et al. (U.S. Patent 3,994,590).

Papadimitriou et al. has been discussed above in regard to claims 1-7 and 17. The difference between Papadimitriou et al. and the claimed invention is that Papadimitriou et al. uses photofet for collision detection while the claimed invention uses PIN diode. Di Martini et al. teaches in col. 3, lines 28-33 that PIN diode and photofet are equivalents. Where the claimed differences involve the substitution of interchangeable or replaceable equivalents and the reason for the selection of one equivalent for another was not to solve an existent problem, such substitution has been judicially determined to have been obvious. See *In re Ruff*, 118, USPQ 343 (CCPA 1958). Thus it would have been obvious to one of ordinary skill in the art at the time

Art Unit: 2633

the invention was made to use PIN diode for the collision detector, as taught by Di Martini et al, to replace the photofet in the optical transceiver of Papadimitriou et al. because they are equivalents.

Allowable Subject Matter

10. Claims 19-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Popp (U.S. Patent 5,341,232) discloses in FIG. 2 an asymmetrical star coupler with active element.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shi K. Li whose telephone number is 703 305-4341. The examiner can normally be reached on Monday-Friday (8:30 a.m. - 5:00 p.m.).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on 703 305-4729. The fax phone numbers for the organization where this application or proceeding is assigned are 703 872-9314 for regular communications and 703 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305-3900.

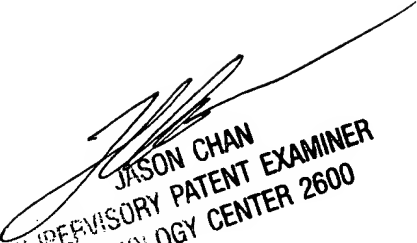
Application/Control Number: 09/584,330

Page 7

Art Unit: 2633

skl

April 27, 2003


JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600